查询RP03-1215SE供应商

Features

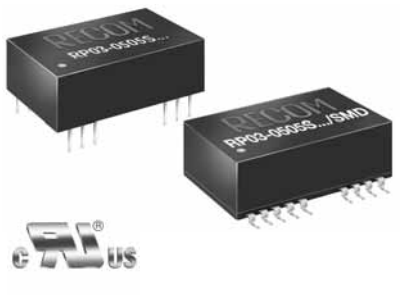
Regulated Converters

- 2:1 Wide Input Voltage Range
- 3 Watts Regulated Output Power
- 1.6kVDC Isolation
- Also Available with Isolated Outputs, Output 1/Output 2 (DS) Isolation
- Low Profile, 10.2 mm Height
- Over Current Protection
- Five-Sided Shield
- No Derating to 71°C
- Non-Conductive Black Plastic
- Standard DIP24 and SMD-Pinning
- UL 1950 Component Recognized
- High Efficiency to 80%

POWERLINE
DC/DC-Converter

RP03-S_DE (DE/DS) Series

3 Watt DIP24 & SMD, Single & Dual Isolated Output



Selection Guide 5V, 12V, 24V and 48V Input Types

Part Number	Input Range	Output Voltage	Output Current	Input [4] Current	Efficiency[5]	Capacitive[6] Load max.
DIP24 (SMD)	VDC	VDC	mA	mA	%	µF
RP03-053.3SE**	4.5-6	3.3	600	638	66	2200
RP03-0505SE**	4.5-6	5	600	910	70	1000
RP03-0512SE**	4.5-6	12	250	845	75	170
RP03-0515SE**	4.5-6	15	200	845	75	110
RP03-123.3SE**	9-18	3.3	600	252	70	2200
RP03-1205SE**	9-18	5	600	352	75	1000
RP03-1212SE**	9-18	12	250	334	79	170
RP03-1215SE**	9-18	15	200	334	79	100
RP03-243.3SE**	18-36	3.3	600	126	70	2200
RP03-2405SE**	18-36	5	600	174	76	1000
RP03-2412SE**	18-36	12	250	165	80	170
RP03-2415SE**	18-36	15	200	165	80	100
RP03-483.3SE**	36-75	3.3	600	61	72	2200
RP03-4805SE**	36-75	5	600	88	75	1000
RP03-4812SE**	36-75	12	250	84	79	170
RP03-4815SE**	36-75	15	200	84	79	100
RP03-0505DE**	4.5-6	±5	±300	870	73	±500
RP03-0512DE**	4.5-6	±12	±125	845	75	±96
RP03-0515DE**	4.5-6	±15	±100	870	73	±47
RP03-1205DE**	9-18	±5	±300	357	74	±500
RP03-1212DE**	9-18	±12	±125	334	79	±96
RP03-1215DE**	9-18	±15	±100	334	79	±47
RP03-2405DE**	18-36	±5	±300	174	76	±500
RP03-2412DE**	18-36	±12	±125	167	79	±96
RP03-2415DE**	18-36	±15	±100	167	79	±47
RP03-4805DE**	36-75	±5	±300	86	77	±500
RP03-4812DE**	36-75	±12	±125	84	79	±96
RP03-4815DE**	36-75	±15	±100	84	79	±47

** add Suffix SMD for SMD package

Description

The E-Series of DC/DC Converters are fully certified to EN 60950: 2000. This makes them ideal for all Telecom and safety applications where approved isolation is required.
They also meet UL 1950 and CSA 950 standards.

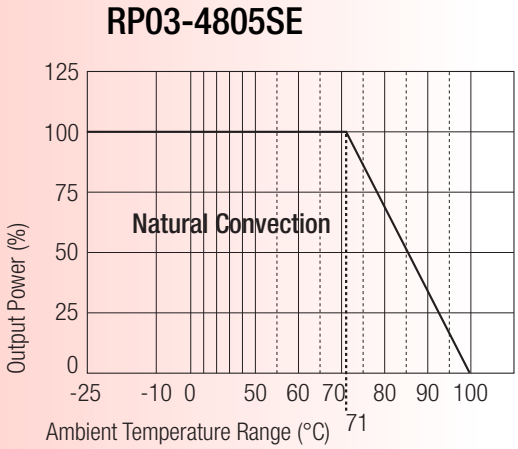
RP03-S_DE (DE/DS) Series

Selection Guide 5V, 12V, 24V and 48V Input Types

Part Number	Input Range	Output Voltage	Output Current	Input [4] Current	Efficiency[5]	Capacitive[6] Load max.
for DE/DS(V1 & V2)		V1 & V2	V1 & V2			V1 & V2
DIP24 (SMD)	VDC	VDC	mA	mA	%	µF
RP03-0505DE/DS**	4.5-6	5 / 5	300 / 300	870	73	500 / 500
RP03-0512DE/DS**	4.5-6	12 / 12	125 / 125	845	75	96 / 96
RP03-0515DE/DS**	4.5-6	15 / 15	100 / 100	870	73	47 / 47
RP03-1205DE/DS**	9-18	5 / 5	300 / 300	357	74	500 / 500
RP03-1212DE/DS**	9-18	12 / 12	125 / 125	334	79	96 / 96
RP03-1215DE/DS**	9-18	15 / 15	100 / 100	334	78	47 / 47
RP03-2405DE/DS**	18-36	5 / 5	300 / 300	174	76	500 / 500
RP03-2412DE/DS**	18-36	12 / 12	125 / 125	167	79	96 / 96
RP03-2415DE/DS**	18-36	15 / 15	100 / 100	167	79	47 / 47
RP03-4805DE/DS**	36-75	5 / 5	300 / 300	86	77	500 / 500
RP03-4812DE/DS**	36-75	12 / 12	125 / 125	84	79	96 / 96
RP03-4815DE/DS**	36-75	15 / 15	100 / 100	84	79	47 / 47

** add Suffix SMD for SMD package

Derating-Graph (Ambient Temperature)



Derating graphes are valid only for the shown part numbers. If you need detailed derating-information about a part-number not shown here please contact our technical customer service at info@recom-development.at

Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	5V nominal input	4.5-6VDC
	12V nominal input	9-18VDC
	24V nominal input	18-36VDC
	48V nominal input	36-75VDC
Input Filter		Pi Type
Input Surge Voltage (100 ms max.)	5V Input	15VDC
	12V Input	36VDC
	24V Input	50VDC
	48V Input	100VDC

continued on next page

RP03-S_DE (DE/DS) Series

Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Reflected Ripple (nominal Vin and full load)		120mAp-p
Start Up Time (nominal Vin and constant resistor load)		30ms typ.
Output Power		3W max.
Output Voltage Accuracy (full Load and nominal Vin)		±2%
Minimum Load (see Note 1)		10% of FL
Line Regulation (LL-HL at full load)		±0.2%
	DS	±0.5%
Load Regulation (25% to 100% FL)	Single	±0.2%
	Dual	±2%
	DS	±0.5%
Cross Regulation (asymmetrical load 25%/100% FL)		±5%
Ripple and Noise (20MHz bandwith)	3.3V, 5V	75mVp-p
	others	1%/p-p of Vout max.
Temperature Coefficient		±0.02%/°C, max.
Transient Response (25% load step change)		500µS
Over Load Protection (% of full load at nominal Vin)		180% typ
Short Circuit Protection		Continuous, automatic recovery
Efficiency		see „Selection Guide“ table
Isolation Voltage	In to out	1.600VDC min.
	Output to Output /DS type	500VDC min.
Isolation Resistance		10^9 Ω min.
Isolation Capacitance		300pF max.
Operating Frequency		100kHz min.
Approved to Safety Standards		UL 1950, EN60950
Operating Temperature Range		-25°C to +71°C
Storage Temperature Range		-55°C to +105°C
Vibration		10-55Hz, 2G, 30 Min. along X, Y and Z
Relative Humidity		5% to 95% RH
Case Material		Non-conductive black plastic
Base Material		Non-conductive black plastic
Potting Material		Epoxy (UL94-V0)
Conducted Emissions	EN55022	Level A
Radiated Emissions	EN55022	Level A
ESD	EN61000-4-2	Perf. Criteria 2
Radiated Immunity	EN61000-4-3	Perf. Criteria 2
Fast Transient	EN61000-4-4	Perf. Criteria 2
Surge	EN61000-4-5	Perf. Criteria 2
Conducted Immunity	EN61000-4-6	Perf. Criteria 2
Weight	DIP	14g
	SMD	15g
Dimensions	DIP	31.8 x 20.3 x 10.2mm
	SMD	32.0 x 20.3 x 10.9mm
MTBF (see note 2)		3.706 x 10^6 Hours

RP03-S_DE (DE/DS) Series

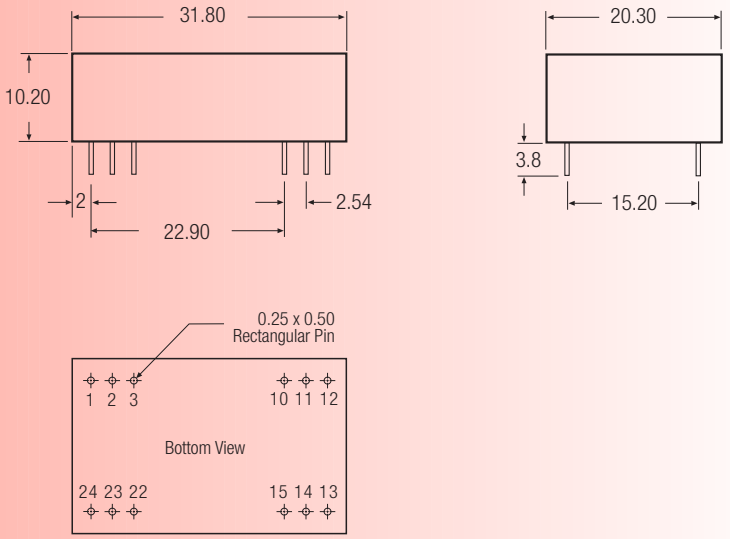
Notes :

1. The RP03 series requires a minimum of 10% loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.
2. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C (Ground fixed and controlled environment).
3. Should an O/O isolation be required, please order the converter with the following part number: RP03-XXXXDE/DS.
4. Maximum value at nominal input voltage and full load of standard type.
5. Typical value at nominal input voltage and full load.
6. Test by minimum Vin and constant resistor load.
7. See application notes for EMI-filtering.

Notes :

DIP24 Package Style

3rd angle projection



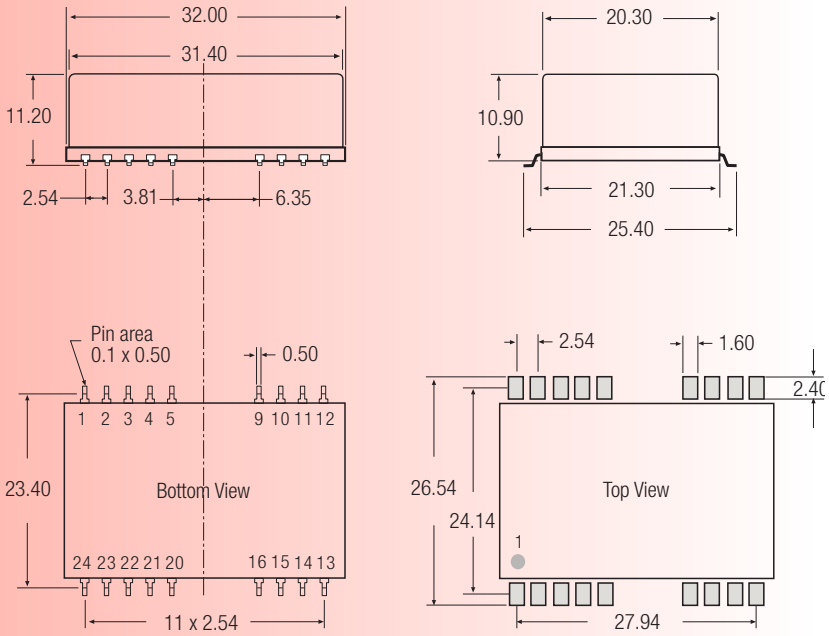
Pin Connections

Pin #	Single	Dual	Dual Separate
1	+ V in	+ V in	+ V in
2	NC	– V out	– V1 out
3	NC	Com	+ V1 out
10	- V out	Com	– V2 out
11	+ V out	+ V out	+ V2 out
12	– V in	– V in	– V in
13	– V in	– V in	– V in
14	+ V out	+ V out	+ V2 out
15	- V out	Com	– V2 out
22	NC	Com	+ V1 out
23	NC	- V out	– V1 out
24	+ V in	+ V in	+ V in

NC = No Connection

Pin Pitch Tolerance ±0.35 mm

SMD Package Style



SMD Package Style

Same spec. as the original DIP spec. and pin definition, excl. of the SMD type pin.

Pin Connections

Pin #	Single	Dual	Dual Separate
1	+ V in	+ V in	+ V in
2	NC	– V out	– V1 out
3	NC	Com	+ V1 out
10	- V out	Com	– V2 out
11	+ V out	+ V out	+ V2 out
12	– V in	– V in	– V in
13	– V in	– V in	– V in
14	+ V out	+ V out	+ V2 out
15	- V out	Com	– V2 out
22	NC	Com	+ V1 out
23	NC	- V out	– V1 out
24	+ V in	+ V in	+ V in
Others	NC	NC	NC

NC = No Connection

Pin Pitch Tolerance ±0.35 mm

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